SRNL
SAVANNAH RIVER NATIONAL LABORATORY

techbriefs

RadRope™ Portable Nuclear Material Detection System

This lightweight, portable system can rapidly detect the presence of nuclear materials in sealed containers without the use of harmful x-rays. Using sensors arrayed linearly and encased in fabric, the RadRope system can be dangled in the 2 to 4 inch gap between stacked shipping containers on a cargo ship by a customs inspector. As the inspector walks along the top containers, a hand-held PDA shows an alarm when any sensor in the array detects radiation levels above background radiation.

The RadRope system has been beta-tested for the U.S. Coast Guard on ships entering port in Charleston, SC.

Simple design

Geiger Muller tubes comprise the sensor nodes. Many independently operated sensor nodes can be strung together in any length. Analog-to-digital converters attached to each sensor send data to the PDA, or to a CPU. A user interface receives and displays the data.

The Geiger Muller tubes can be configured to detect both gamma and neutron radiation.

Flexible

The RadRope system can be used in a straight line, a curved line, or an angled line. For example, the system can be mounted on a frame through which items of interest can be passed.

The length of the RadRope system can be easily customized for different uses.

at a glance

- portable
- easily used by one person
- detects gamma and neutron radiation
- quickly covers large area
- patent pending

Patents and licenses

A patent application has been filed for the RadRope Portable Nuclear Material Detection System with the U.S. Patent and Trademark Office.

Technology transfer

SRNL is the applied research and development laboratory at the Savannah River Site (SRS). With its wide spectrum and expertise in areas such as homeland security, hydrogen technology, materials, sensors, and environmental science, SRNL's cutting edge technology delivers high dividends to its customers.

Washington Savannah River Company (WSRC) manages SRNL and SRS for the U.S. Department of Energy. WSRC is responsible for transferring its technologies to the private sector so that these technologies may have the collateral benefit of enhancing U.S. economic competitiveness.

Partnering opportunity

WSRC invites interested companies with proven capabilities in this area of expertise to enter into a licensing agreement with WSRC to market this nuclear material detection system. Interested companies will be requested to submit a business plan setting forth company qualifications, strategies, activities, and milestones for commercializing this invention. Qualifications should include past experience at bringing similar products to market, reasonable schedule for product launch, sufficient manufacturing capacity, established distribution networks, and evidence of sufficient financial resources for product development and launch.

for more information

Dale K. Haas, Licensing Specialist

Savannah River National Laboratory
Bldg. 773-41A, Rm. 238, Aiken, SC 29808

Phone: 803-725-4185 or 800-228-3843

Fax: 803-725-4988

E-mail: dale.haas@srs.gov

We Put Science To Work™

05A00233-24